

Federal Housing Finance Agency  
Office of Inspector General



# Status of the Development of the Common Securitization Platform



## At A Glance

May 21, 2014

### Status of the Development of the Common Securitization Platform

#### Why OIG Did This Report

The Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) (collectively, the Enterprises) support housing finance primarily by purchasing qualifying mortgages from lenders, packaging them into mortgage-backed securities (MBS), and selling the securities to investors. The process of packaging mortgages into MBS is commonly referred to as securitization.

In 2012, the Federal Housing Finance Agency (FHFA or Agency) concluded that the back office systems by which the Enterprises securitize mortgages were outmoded and in need of being immediately upgraded and maintained. Subsequently, FHFA, as conservator, directed the Enterprises to build the Common Securitization Platform (CSP or Platform) to replace some parts of the Enterprises' back office systems.

FHFA assumed, but did not verify, that developing the CSP would be more cost-effective than each Enterprise separately pursuing expensive upgrades to their back office systems. In addition, FHFA envisioned the CSP as a potential market utility and a way to maintain liquidity in the mortgage market that could outlive the Enterprises' current structures. In this respect, the Agency viewed the CSP as a means to support congressional and executive branch efforts to reform the nation's housing finance system.

As of December 31, 2013, the Enterprises had spent approximately \$65 million on the CSP's development.

We initiated this evaluation given the CSP's importance to the future operations of the housing finance system. The report provides a primer on the CSP, updates the project's status, and identifies certain challenges to its development and implementation. It also contains recommendations to FHFA – specifically, that it develop timelines for the project's completion as well as estimates of its total cost.

#### What OIG Found

*FHFA and the Enterprises Have Made Some Progress in Developing the CSP*

Under FHFA's oversight, the Enterprises have made some progress in developing the CSP. An FHFA official told us that, as of March 2014, roughly half of the necessary software development had been completed. According to FHFA, a consultant hired by the Enterprises found the CSP is well-designed.



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However, other critical technology-related functions, such as disaster recovery, have only recently been initiated.

FHFA has also established an independent corporate entity, Common Securitization Solutions, LLC (CSS), that will develop, build, own, and operate the CSP. However, CSS, which is jointly owned by the Enterprises, does not yet have a chair for its Board of Managers or a chief executive officer. FHFA recently appointed two senior executives for CSS.

### *CSP's Development and Implementation Face Considerable Challenges*

While some progress has been made in developing the CSP, the project faces considerable challenges that could undermine its prospects for success, including:

- The difficulties inherent in developing a large-scale information technology (IT) system. These difficulties are compounded by several factors including: the number of parties involved in the development of the CSP – FHFA, Fannie Mae, Freddie Mac, and CSS; the Enterprises' records of overseeing unsuccessful large-scale IT projects that neither satisfied requirements, achieved stated goals in a timely manner, nor stayed on budget; and the fact that FHFA is a small regulator with multiple responsibilities and no prior experience overseeing the development and implementation of a large-scale IT project.
- The risks involved with preparing the Enterprises to integrate with the CSP. The Enterprises must modify their internal financial and information systems to enable the Enterprises to communicate with the CSP. FHFA and Enterprise officials described the technical challenges associated with integration as significant and potentially costly. In 2013, FHFA required the Enterprises to submit integration plans. To date, however, FHFA has not approved either Enterprise's plan.

### *Finding: FHFA Has Not Yet Fully Employed Essential Project Management Tools in the Development of the CSP*

To date FHFA has not fully employed two basic project management tools in its effort to develop the CSP: a comprehensive timeline and total cost estimate for the project. Both the Office of Management and Budget (OMB) and the Government Accountability Office (GAO) have stated that timelines and cost estimates are essential to the successful development and implementation of large IT projects.

FHFA, Fannie Mae, Freddie Mac, and CSS have all proposed interim schedules and budgets. However, an FHFA official told us that a number of



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significant challenges have prevented them from developing a comprehensive and final timeline and cost estimate for the CSP. In particular, they cited as obstacles the complexities and uncertainties surrounding the Enterprises' integration plans, especially the modification of the Enterprises' internal systems to communicate with the CSP.

We recognize the challenges that FHFA faces; but we also note that it is now better-positioned to develop timelines and cost estimates for the CSP than it was at the outset. Specifically, the Agency can predicate timelines and cost estimates on the work that has already been completed, such as the software that has been developed. Further, if FHFA approves the Enterprises' revised integration plans, then developing timeframes and cost estimates for that critical aspect of the project would be within reach. On the other hand, moving forward without employing these critical project management tools would, in our estimate, increase the risks inherent in the development and implementation of the CSP. Moreover, Congress and outside parties would lack assurance that the CSP should be developed.

## What OIG Recommends

To strengthen its management of the CSP, we recommend that FHFA:

1. Establish schedules and timeframes for the completion of key components of the project, as well as an overall completion date; and
2. Establish cost estimates for varying stages of the initiative, as well as an overall cost estimate.

FHFA agreed with these recommendations.

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## ABBREVIATIONS .....

CEO	Chief Executive Officer
CSP or Platform	Common Securitization Platform
CSS	Common Securitization Solutions, LLC
DER	Division of Enterprise Regulation
Enterprises	Fannie Mae and Freddie Mac, collectively
Fannie Mae	Federal National Mortgage Association
FHFA or Agency	Federal Housing Finance Agency
Freddie Mac	Federal Home Loan Mortgage Corporation
GAO	Government Accountability Office
HERA	Housing and Economic Recovery Act of 2008
IT	Information Technology
MBS	Mortgage-Backed Securities
OIG	Federal Housing Finance Agency Office of Inspector General
OMB	Office of Management and Budget
PLMBS	Private-Label Mortgage-Backed Securities
SEC	Securities and Exchange Commission

## PREFACE.....

The Enterprises support the secondary mortgage market by purchasing mortgages that meet their underwriting standards from lenders such as banks and thrifts. Typically, the Enterprises package the mortgages into MBS which investors may purchase. The process of converting mortgages into MBS is referred to as securitization.

Although the Enterprises have successfully issued MBS for many years, FHFA has publicly raised concerns about some of the critical back office systems upon which the Enterprises rely to securitize mortgages. In the past two years, FHFA has described the Enterprises' systems as "outmoded," "in immediate need of being upgraded and maintained," and "not effective at adapting to market changes."

In 2012, FHFA, acting under its conservatorship authority, directed the Enterprises to develop a shared securitization platform: the CSP. FHFA believed that developing the CSP would be both more efficient and less costly than each Enterprise separately pursuing upgrades to their proprietary back office systems. Further, FHFA envisioned the CSP as a way to maintain liquidity in the mortgage market that would outlive the Enterprises' current structures. In this respect, the Agency viewed the CSP as a means to support congressional and executive branch efforts to reform the nation's housing finance system.<sup>1</sup>

We conducted this evaluation because of the CSP's importance to the Enterprises' operations and its potential impact on the housing finance system. This report provides a primer on the CSP, updates the project's status, and identifies certain challenges to its development and implementation. It also sets forth our finding: FHFA has not fully implemented essential project management tools – timelines and cost estimates for the development of the CSP – and recommends that the Agency do so in order to enhance its potential for success.

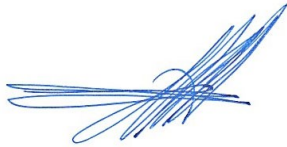
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<sup>1</sup> Federal legislators introduced two major reform bills in 2013: Protecting American Taxpayers and Homeowners Act of 2013 (PATH Act), H.R. 2767, 113th Cong. (2013); and Housing Reform and Taxpayer Protection Act of 2013, S. 1217, 113th Cong. (2013). Both bills anticipate the successful development of the CSP. The PATH Act also incorporates the CSP as part of a national mortgage market utility. On March 16, 2014, the Senate Committee on Banking, Housing, and Urban Affairs (Senate Banking Committee) released the legislative text of a bipartisan housing finance reform agreement that includes a securitization platform. See Johnson-Crapo Discussion Draft of March 16, 2014 (online at: [http://banking.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore\\_id=512757b1-e595-4b85-8321-30d91e368849](http://banking.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=512757b1-e595-4b85-8321-30d91e368849)). On March 27, 2014, Congresswoman Maxine Waters, Ranking Member of the House Financial Services Committee, released a legislative proposal to reform the housing finance market that includes the CSP. See Housing Opportunities Move the Economy Forward Act of 2014 Discussion Draft of March 27, 2014 (online at: [http://democrats.financialservices.house.gov/FinancialSvcsDemMedia/file/003%20Maxine%20Waters%20Legislation/GSE%20Bill/WATERS\\_046\\_xml.pdf](http://democrats.financialservices.house.gov/FinancialSvcsDemMedia/file/003%20Maxine%20Waters%20Legislation/GSE%20Bill/WATERS_046_xml.pdf)).



This report was prepared by David P. Bloch, Director, Division of Mortgage, Investments, and Risk Analysis; Charlie Divine, Investigative Counsel; Alexa Strear, Investigative Counsel; Beth Preiss, Program Analyst; and Ezra Bronstein, Investigative Counsel.

We appreciate the assistance of FHFA and the Enterprises in completing this report. It has been distributed to Congress, the Office of Management and Budget, and others and will be posted on OIG's website, [www.fhfaoig.gov](http://www.fhfaoig.gov).



Richard Parker  
Deputy Inspector General for Evaluations

## CONTEXT .....

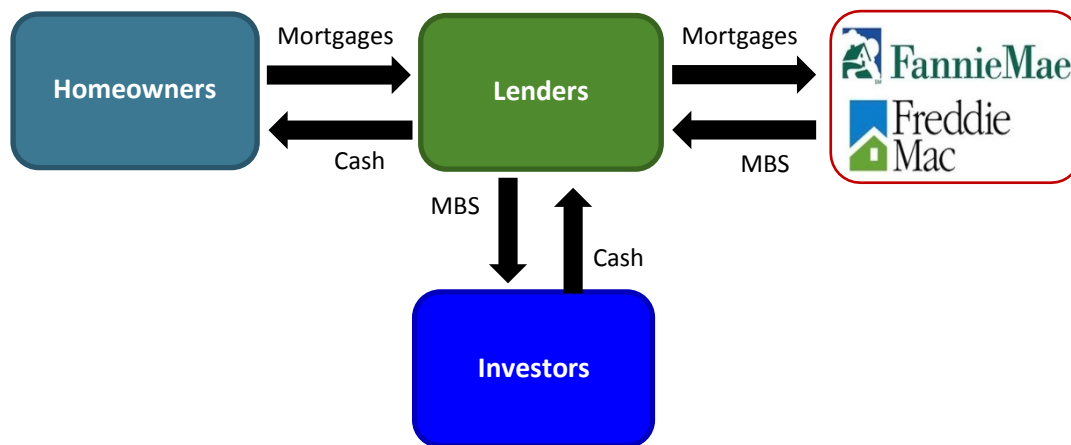
### How the Mortgage Securitization Process Works

Lenders, such as banks and thrifts, must ensure that single-family mortgages they plan to sell to the Enterprises meet their standards. For example, the underwriting associated with such mortgage loans must meet the Enterprises' guidelines on matters such as a borrower's credit score and debt-to-income ratio. Moreover, the maximum principal balance of a mortgage offered for sale to an Enterprise may not exceed the Enterprises' conforming loan limit, which, in most locations, is now \$417,000.<sup>2</sup>

A lender that has originated mortgages consistent with these standards may sell them to an Enterprise in two ways. First, as depicted in Figure 1, the lender can **swap** the loans for Enterprise MBS, which the lender can then sell to investors. Second, as depicted in Figure 2, the lender can sell the mortgages to an Enterprise for cash and the Enterprise can securitize the mortgages and sell MBS to investors. In both cases, the mortgages end up as part of an Enterprise MBS, and lenders obtain cash they can use to make further loans, thereby creating liquidity for the housing finance market.<sup>3</sup>

In a **swap**, the lender exchanges mortgages for Enterprise MBS backed by those same mortgages.

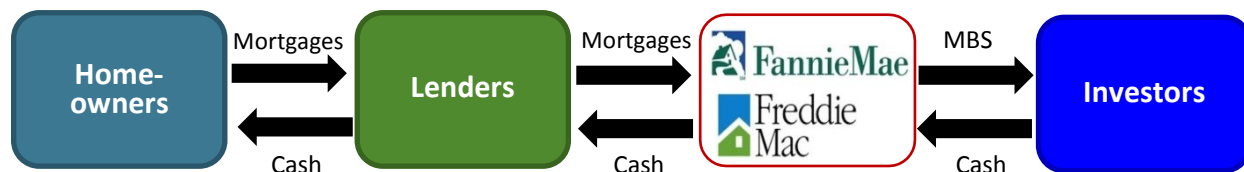
**FIGURE 1. LENDER SWAPS MORTGAGES FOR ENTERPRISE MBS**



<sup>2</sup> For more information, see OIG, *FHFA's Oversight of Fannie Mae's Single-Family Underwriting Standards*, at 2 (Mar. 22, 2012) (AUD-2012-003) (online at: [www.fhfa.gov/Content/Files/AUD-2012-003\\_0.pdf](http://www.fhfa.gov/Content/Files/AUD-2012-003_0.pdf)).

<sup>3</sup> Alternatively, each Enterprise may also purchase loans and hold them in its retained mortgage portfolio.

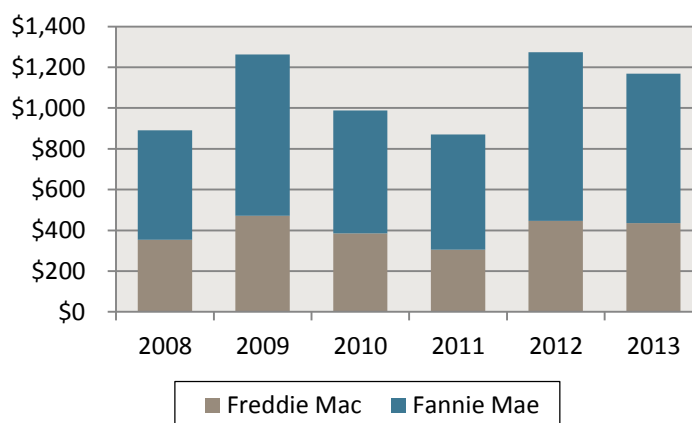
**FIGURE 2. LENDER SELLS MORTGAGES TO AN ENTERPRISE FOR CASH**



In exchange for a fee, the Enterprises guarantee that investors will continue to receive the timely payment of principal and interest on their MBS regardless of the credit performance of the underlying mortgages.<sup>4</sup>

The Enterprises are the largest issuers of MBS. As shown in Figure 3, the Enterprises' MBS issuances fluctuated from 2008 through 2013, ranging from a low of slightly more than \$850 billion in 2011 to more than \$1.2 trillion in both 2009 and 2012. Fannie Mae issues substantially more MBS than Freddie Mac. For example, in 2013, Fannie Mae's MBS issuances of approximately \$733 billion accounted for more than 60% of the Enterprises' total issuances of more than \$1.16 trillion during the year.

**FIGURE 3. ENTERPRISE SINGLE-FAMILY MBS ISSUANCES, 2008-2013 (\$BILLIONS)**



Source: Fannie Mae and Freddie Mac.

## The Enterprises' Back Office Securitization Processes Are the Focus of the CSP

Each Enterprise has its own set of proprietary internal systems that perform the critical **back office** functions to produce, issue, and service MBS. The five functions discussed below are currently performed by the Enterprises' back office systems and largely the focus of the CSP:<sup>5</sup>

**Back office** functions are those related to the inner working of a business or institution.

<sup>4</sup> For more information about the Enterprises' guarantees and the fees associated with them, see OIG, *FHFA's Initiative to Reduce the Enterprises' Dominant Position in the Housing Finance System by Raising Gradually Their Guarantee Fees* (July 16, 2013) (EVL-2013-005) (online at: [www.fhfaoig.gov/Content/Files/EVL-2013-005\\_4.pdf](http://www.fhfaoig.gov/Content/Files/EVL-2013-005_4.pdf)).

- Data Acceptance – Data acceptance is the process by which the Enterprises validate<sup>6</sup> loan level data associated with mortgages they pool and plan to securitize. For example, the Enterprises confirm that zip codes of the mortgaged properties are expressed in the correct format, i.e., in nine numbers. The Enterprises also confirm that the underlying mortgages conform to certain of the Enterprises’ MBS rules.<sup>7</sup> For example, with a 30-year fixed-rate security, the Enterprise will verify that all of the loans in the underlying pool contain the appropriate characteristics.
- Issuance Support – Issuance is the process of offering MBS to investors. To initiate this process, the Enterprises transmit to the Federal Reserve Bank of New York basic facts about the security, the prospectus, and their initial disclosures. The Enterprises publish initial disclosure information simultaneous to the security issuance.
- Disclosures – Disclosure is the process by which the Enterprises publish statements for their MBS investors that describe the securities issued and the characteristics of the underlying mortgage pools. The Enterprises publish disclosures using monthly data provided by **servicers**.
- Master Servicing Operations – The Enterprises serve as master servicers for the MBS they issue. Master servicing functions include the collection and reconciliation of loan data reported by the servicers. For example, the Enterprises compare their own calculations of expected monthly principal and interest payments with the amounts reported to them by servicers each month.
- Bond Administration – Bond administration is the process by which the Enterprises ensure that payments associated with their MBS are calculated and distributed appropriately. Bond administration includes calculating the monthly principal and interest payments for MBS. As part of this function, the Enterprises generate MBS performance metrics that are included in their monthly MBS disclosures.

**Servicers** are intermediaries between mortgage borrowers and mortgage owners. Servicers collect monthly payments from borrowers, remit payments to owners, maintain records, and handle delinquencies.

<sup>5</sup> The CSP’s five functions are a subset of the back office systems the Enterprises use to produce, issue, and service MBS. For further discussion of the five back office functions that are the focus of the CSP see FHFA, *Building a New Infrastructure for the Secondary Mortgage Market* (White Paper) (Oct. 4, 2012) (online at: [www.fhfa.gov/PolicyProgramsResearch/Research/PaperDocuments/FHFA\\_Securitization\\_White\\_Paper\\_N508\\_L.pdf](http://www.fhfa.gov/PolicyProgramsResearch/Research/PaperDocuments/FHFA_Securitization_White_Paper_N508_L.pdf)); FHFA, *A Progress Report on the Common Securitization Infrastructure* (Progress Report) (Apr. 30, 2013) (online at: [www.fhfa.gov/Media/PublicAffairs/Documents/WhitePaperProgressReport43013.pdf](http://www.fhfa.gov/Media/PublicAffairs/Documents/WhitePaperProgressReport43013.pdf)).

<sup>6</sup> In validating data submitted, the Enterprises do not attempt to confirm that all data are accurate. Instead, the Enterprises confirm that data were entered in the appropriate format.

<sup>7</sup> The Enterprises’ MBS rules set the standards for the pooling and delivery of mortgages to the Enterprises. These rules are based on the Securities Industry and Finance Markets Association guidelines for the To-Be-Announced market.

## In FHFA's View, the Enterprises' Back Office Securitization Systems Are Flawed

The Enterprises rely on their back offices to issue a high volume of MBS. Over the last two years, however, FHFA has described the Enterprises' systems as “outmoded,”<sup>8</sup> “in immediate need of being upgraded and maintained,”<sup>9</sup> and “[in]effective at adapting to market changes, issuing securities that attract private capital, aggregating data, or lowering barriers to market entry.”<sup>10</sup> Moreover, FHFA has stated that the Enterprises' systems are insufficient to serve as a market utility<sup>11</sup> – a cornerstone of FHFA's Strategic Plan – without substantial investment of both human capital and information technology resources.

### Fannie Mae

FHFA and Fannie Mae agree that Fannie Mae's infrastructure is of particular concern. Fannie Mae executives have characterized the Enterprise's systems as aging and costly. The Enterprise's systems are also inflexible and difficult to fix because they are not **modular**. The lack of modularity and interdependence of Fannie Mae's systems means that Fannie Mae cannot modify one system without affecting others.

**Modular** refers to a feature of an IT system's design that allows one or more components to be modified or replaced without affecting the other components.

The relative inflexibility of Fannie Mae's current systems makes it challenging for Fannie Mae's systems to accommodate some FHFA policy initiatives. Specifically, Fannie Mae may

<sup>8</sup> FHFA, *Annual Report to Congress – 2012*, at 13 (June 13, 2013) (online at: [www.fhfa.gov/AboutUs/Reports/ReportDocuments/2012\\_AnnualReportToCongress\\_508.pdf](http://www.fhfa.gov/AboutUs/Reports/ReportDocuments/2012_AnnualReportToCongress_508.pdf)).

<sup>9</sup> FHFA, *Responses to Written Questions of Senator Crapo from Edward J. DeMarco*, at 47 (May 17, 2013) (online at: [www.gpo.gov/fdsys/pkg/CHRG-113shrg80775/pdf/CHRG-113shrg80775.pdf](http://www.gpo.gov/fdsys/pkg/CHRG-113shrg80775/pdf/CHRG-113shrg80775.pdf)).

<sup>10</sup> FHFA, *Statement of Edward J. DeMarco, Acting Director Federal Housing Finance Agency, Before the U.S. Senate Committee on Banking, Housing and Urban Affairs* (Apr. 18, 2013) (online at: [www.fhfa.gov/Media/PublicAffairs/Pages/Statement-of-Edward-J-DeMarco-Acting-Director-FHFA-Before-the-US-Senate-Committee-on-Banking-Housing-and-Urban-Affa359.aspx](http://www.fhfa.gov/Media/PublicAffairs/Pages/Statement-of-Edward-J-DeMarco-Acting-Director-FHFA-Before-the-US-Senate-Committee-on-Banking-Housing-and-Urban-Affa359.aspx)).

<sup>11</sup> FHFA has described the CSP as a potential “market utility” or “public utility.” FHFA explained the CSP's role as a utility in its Strategic Plan: “[f]or the [CSP] to have long-term value, it should have an open architecture that will permit multiple future issuers of mortgage-backed securities to access [it] and it should be flexible enough to permit a wide array of securities and mortgage structures.” FHFA, *A Strategic Plan for Enterprise Conservatorships: The Next Chapter in a Story that Needs an Ending* (Strategic Plan), at 13 (Feb. 21, 2012) (online at: [www.fhfa.gov/AboutUs/Reports/ReportDocuments/20120221\\_StrategicPlanConservatorships\\_508.pdf](http://www.fhfa.gov/AboutUs/Reports/ReportDocuments/20120221_StrategicPlanConservatorships_508.pdf)). In remarks prepared for a November 2012 speech, the then Acting Director further explained that, “this new infrastructure must be operable across many platforms, so that it can be used by any issuer, servicer, agent, or other party who decides to participate.” FHFA, *Recent Accomplishments and a Look Ahead at the Future of Housing Finance, Remarks as Prepared for Delivery, Edward J. DeMarco, Acting Director Federal Housing Finance Agency* (Nov. 28, 2012) (online at: [www.fhfa.gov/Media/PublicAffairs/Pages/Remarks-as-Prepared-for-Delivery-Edward-J-DeMarco-Acting-Director-FHFA-The-Exchequer-Club.aspx](http://www.fhfa.gov/Media/PublicAffairs/Pages/Remarks-as-Prepared-for-Delivery-Edward-J-DeMarco-Acting-Director-FHFA-The-Exchequer-Club.aspx)).

find it difficult to execute certain risk-sharing transactions<sup>12</sup> and improve its MBS disclosures. Fannie Mae, however, contends that its systems are well-calibrated to the Enterprise's current MBS business, and the limitations of its systems relate to its ability to process MBS in a hypothetical future state of the MBS market.

### **Freddie Mac**

Freddie Mac's systems are also of concern to FHFA, although not to the same degree as Fannie Mae's systems. This is due, in large part, to the fact that Freddie Mac's systems are more modular and, therefore, more flexible, than Fannie Mae's. Consequently, the older elements of Freddie Mac's systems are more conducive to being upgraded.

Freddie Mac itself disclosed in its 2010, 2011, and 2012 annual reports to the Securities Exchange Commission (SEC) that the Enterprise's "core systems and technical architecture include many legacy systems and applications that lack scalability and flexibility, which increases the risk of system failure."<sup>13</sup> According to Freddie Mac, the same language was not included in its 2013 annual report, published in 2014, because the Enterprise completed a three-year remediation program that addressed these risks for most of its systems. Notably, in the 2013 report, for the first time Freddie Mac disclosed that the Enterprise's efforts to assist in the building of a new housing finance system increases the Enterprise's operational risk.<sup>14</sup>

### **Fannie Mae Sought to Replace its Back Office Systems in 2010 and 2011**

Fannie Mae initiated a project to replace its back office securitization systems in 2010. As part of that effort, Fannie Mae undertook a comprehensive review of its securitization

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<sup>12</sup> FHFA mandated risk-sharing transactions to transfer risk from the Enterprises to private investors. FHFA's stated goal in directing the Enterprises to engage in risk-sharing transactions is to reduce their market footprint and, ultimately, protect taxpayers. See FHFA, *Statement of FHFA Acting Director Edward J. DeMarco on Freddie Mac Insurance Risk Sharing Transaction* (Nov. 12, 2013) (online at: [www.fhfa.gov/Media/PublicAffairs/Pages/Statement-of-FHFA-Acting-Director-Edward-J-DeMarco-on-Freddie-Mac-Insurance-Risk-Sharing-Transaction.aspx](http://www.fhfa.gov/Media/PublicAffairs/Pages/Statement-of-FHFA-Acting-Director-Edward-J-DeMarco-on-Freddie-Mac-Insurance-Risk-Sharing-Transaction.aspx)). To date, the Enterprises have issued over \$2.5 billion (combined) in risk-sharing securities from their proprietary infrastructures.

<sup>13</sup> Freddie Mac, *Form 10-K for the Fiscal Year Ended December 31, 2012*, at 76 (Feb. 28, 2013) (online at: [www.freddiemac.com/investors/er/pdf/10k\\_022813.pdf](http://www.freddiemac.com/investors/er/pdf/10k_022813.pdf)); Freddie Mac, *Form 10-K for the Fiscal Year Ended December 31, 2011*, at 72 (Mar. 9, 2012) (online at: [www.freddiemac.com/investors/er/pdf/10k\\_030912.pdf](http://www.freddiemac.com/investors/er/pdf/10k_030912.pdf)); Freddie Mac, *Form 10-K for the Fiscal Year Ended December 31, 2010*, at 59 (Feb. 24, 2011) (online at: [www.freddiemac.com/investors/er/pdf/10k\\_022411.pdf](http://www.freddiemac.com/investors/er/pdf/10k_022411.pdf)).

<sup>14</sup> Freddie Mac's 2013 annual report states: "We also face increased operational risk due to the magnitude and complexity of the new initiatives we are undertaking, including our effort to help build a new housing finance system. Some of these initiatives require significant changes to our operational systems. In some cases, the changes must be implemented within a short period of time. Our legacy systems may also create increased operational risk for these new initiatives." Freddie Mac, *Form 10-K for the Fiscal Year Ended December 31, 2013*, at 52 (Feb. 27, 2014) (online at: [www.freddiemac.com/investors/er/pdf/10k\\_022714.pdf](http://www.freddiemac.com/investors/er/pdf/10k_022714.pdf)).

infrastructure and considered outsourcing back office functions to a vendor. Ultimately, Fannie Mae determined that the solicited vendors lacked the required capabilities.

In mid-2011, Fannie Mae launched a new initiative to consider upgrades to its securitization systems. The team developed a concept for a revised system that would:

- Move existing back office functions to a new platform that would use standard interfaces;
- Require modifying surrounding legacy systems to use the platform's standard services and interfaces;
- Allow for incremental testing of development versions to mitigate integration and execution risk;
- Consist of five modules that comprise the back office functions described above; and
- Survive regardless of the Enterprise's future as determined through the housing finance reform process initiated by Congress.

In the fourth quarter of 2011, a working group of Fannie Mae's Board of Directors permitted the Enterprise to develop a prototype of a five-module infrastructure. However, that effort ended as a Fannie Mae standalone project after FHFA announced its plans for a common platform for the Enterprises.<sup>15</sup> As described below, Fannie Mae's prototype was adopted for the CSP.

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<sup>15</sup> In contrast, Freddie Mac's Board of Directors did not approve the build of the CSP because the Enterprise was not directly engaged in the early development of the prototype. As a consequence, the CSP build was not subject to the normal vetting at Freddie Mac typical of a project of its size and scope. For example, the Enterprise did not develop a business case for the CSP build.

## FHFA Directed the Enterprises to Build the CSP

FHFA announced its intent to build a common securitization platform in its February 2012 Strategic Plan.<sup>16</sup> As envisioned by FHFA, the CSP could serve as a market utility for the future,<sup>17</sup> supporting the back office securitization operations of the Enterprises as well as other market participants.<sup>18</sup> The CSP superseded Fannie Mae's ongoing project to upgrade its back office systems, and FHFA directed the Enterprises to develop a common system.

Over time, FHFA has articulated a number of goals for the CSP, including:

- Replacing elements of the Enterprises' outmoded back office systems;
- Conserving taxpayer dollars by investing once (CSP) and using twice (by both Enterprises);
- Providing a common and flexible platform capable of accommodating various securitization structures, including risk-sharing structures that may not be compatible with the Enterprises' infrastructures;
- Supporting other market participants, for example, issuers of private-label MBS (PLMBS)<sup>19</sup>;
- Facilitating policy changes, emerging standards, new technologies, and regulatory reforms;

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<sup>16</sup> See FHFA, *A Strategic Plan for Enterprise Conservatorships: The Next Chapter in a Story that Needs an Ending* (Feb. 21, 2012) (online at: [www.fhfa.gov/AboutUs/Reports/ReportDocuments/20120221\\_StrategicPlanConservatorships\\_508.pdf](http://www.fhfa.gov/AboutUs/Reports/ReportDocuments/20120221_StrategicPlanConservatorships_508.pdf)) (hereinafter "FHFA Strategic Plan"). FHFA identified priorities in the Strategic Plan in light of its interpretation of its mandates under the Housing and Economic Recovery Act of 2008 (HERA). These mandates include FHFA's authority as conservator to take necessary actions to put the Enterprises in a safe and sound condition and to preserve and conserve their assets. Additionally, FHFA states that its Strategic Plan is in accordance with the conservator's statutory purpose of "reorganizing, rehabilitating, or winding up the affairs" of the Enterprises.

<sup>17</sup> The CSP will not be designed primarily for other market participants to use in the near term. However, the CSP will be designed with standard interfaces and technology so that it will be adaptable for other market participants to use in the future. See FHFA, *Managing the Present: The 2014 Strategic Plan for the Conservatorships of Fannie Mae and Freddie Mac*, Prepared Remarks of Melvin L. Watt, Director, Federal Housing Finance Agency (May 13, 2014) (online at: [www.fhfa.gov/Media/PublicAffairs/Pages/Watt-Brookings-Keynote-5132014.aspx](http://www.fhfa.gov/Media/PublicAffairs/Pages/Watt-Brookings-Keynote-5132014.aspx)).

<sup>18</sup> The Government National Mortgage Association (Ginnie Mae) launched the first phase of a securitization platform modernization initiative in December 2013. The FHFA official responsible for the CSP project spoke with counterparts at Ginnie Mae, but discussions were suspended before FHFA could conclude whether Ginnie Mae's platform would satisfy the Enterprises' requirements.

<sup>19</sup> PLMBS are MBS that are issued or guaranteed by market participants other than the Enterprises, Ginnie Mae, or other government entities.



- Allowing for a single-mortgage backed security for the two Enterprises; and
- Serving as a market utility that could be used even if the Enterprises were terminated.

Further, FHFA expects the CSP to yield a net benefit to taxpayers. Specifically, FHFA anticipates that the development of the CSP, and the potential replacement of elements of the Enterprises' proprietary infrastructures, will conserve taxpayer funds. Indeed, FHFA stated that the CSP "will be one way American taxpayers realize a return on their substantial investment in the Enterprises while also making it possible to retire the Enterprises' proprietary systems...."<sup>20</sup>

### ***FHFA Did Not Conduct a Cost Analysis When It Initiated the CSP Project in 2012***

FHFA initiated the CSP project without detailed analyses of the cost or estimated time to complete the project. FHFA said it considered factors such as the Enterprises' costs to maintain their current securitization infrastructures; the problems with those infrastructures;<sup>21</sup> and the future needs of the housing finance system. An FHFA official told us that FHFA assumed that building one infrastructure for two Enterprises would save resources. As detailed in our finding below, however, the Agency did not confirm its assumption with any analysis.<sup>22</sup>

### **The CSP Will Not Fully Replace the Enterprises' Back Office Securitization Systems**

According to FHFA, when it is built, the CSP will be a separate IT system composed of five modules that will perform some of the Enterprises' back office securitization functions described above more flexibly and efficiently.<sup>23</sup> That is, the CSP will enable the Enterprises to add functionality without having to rely on expensive manual changes, particularly at Fannie Mae. If executed as intended, the CSP could permit the Enterprises to reduce alteration and maintenance costs, test a specific module without affecting other modules, accommodate new products, and create accessibility for other market participants.

<sup>20</sup> FHFA Strategic Plan, *supra* note 16, at 14.

<sup>21</sup> See above for a discussion of the perceived problems in the Enterprises' current infrastructures.

<sup>22</sup> Approximately eight months after FHFA announced its Strategic Plan, the Agency released a White Paper on the CSP and requested public comment. The White Paper was descriptive in nature but did not discuss the cost of the CSP initiative or set forth a schedule for the project. It did note, however, that the endeavor would likely be a multi-year effort. FHFA expects, but has not confirmed, that the CSP will represent a cost savings to the Enterprises and, thus, a net return for taxpayers. See FHFA, *White Paper* (Oct. 4, 2012) (online at: [www.fhfa.gov/PolicyProgramsResearch/Research/PaperDocuments/FHFA\\_Securitization\\_White\\_Paper\\_N508\\_L.pdf](http://www.fhfa.gov/PolicyProgramsResearch/Research/PaperDocuments/FHFA_Securitization_White_Paper_N508_L.pdf)).

<sup>23</sup> The five modules are: (1) data acceptance, (2) issuance support, (3) disclosures, (4) master servicing operations, and (5) bond administration.

According to the team developing the CSP, it will be built in a modular fashion utilizing standardized securitization services and **interfaces**. FHFA anticipates that these design features, among others, will allow the CSP to adapt to policy changes and emerging standards and technologies. For example, if FHFA or the Enterprises decide to provide additional disclosures to MBS investors, the issuance support, disclosure, master servicing operations, and bond administration modules should support that change without substantial additional programming.<sup>24</sup>

An **interface** is a point of interconnection between two independent systems or parts of a system at which all the physical, electrical, and logical parameters are in accordance with predetermined values common in an industry.

While the CSP is intended to produce these benefits, it will not replace the Enterprises' current back office systems entirely. The Enterprises will have to continue to maintain and use some of their existing systems for the following three reasons:

- First, it appears that certain existing single-family securitizations may not be transferred to the CSP because of the complexity of designing a system capable of servicing both past and future products.
- Second, the CSP will only support single-family securitization. The Enterprises will continue to use their existing systems for multifamily mortgage securitizations. There are no plans for the CSP to accommodate multifamily mortgage securitizations.
- Third, the Enterprises have some back office systems that will not be part of the CSP. For example, the CSP will not support master servicing functions for non-performing loans. Those duties will remain with the Enterprises.

### **The Enterprises Must Modify their Existing Financial and Information Systems to Integrate with the CSP**

Transferring responsibility for some of the Enterprises' back office securitization systems to the CSP is not simply a matter of building the five modules. Once the CSP is built, the Platform must be able to communicate with the Enterprises. For example, Fannie Mae's Loan Accounting System will use data generated by the CSP, such as the total unpaid principal balance of securitized mortgages, in the Enterprise's financial statements.

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<sup>24</sup> Other enhancements include the flexibility for the data acceptance module to add or change business rules. For example, if FHFA or the Enterprises make a policy decision to limit securitization to loans with certain maturities, the CSP can accommodate the change.

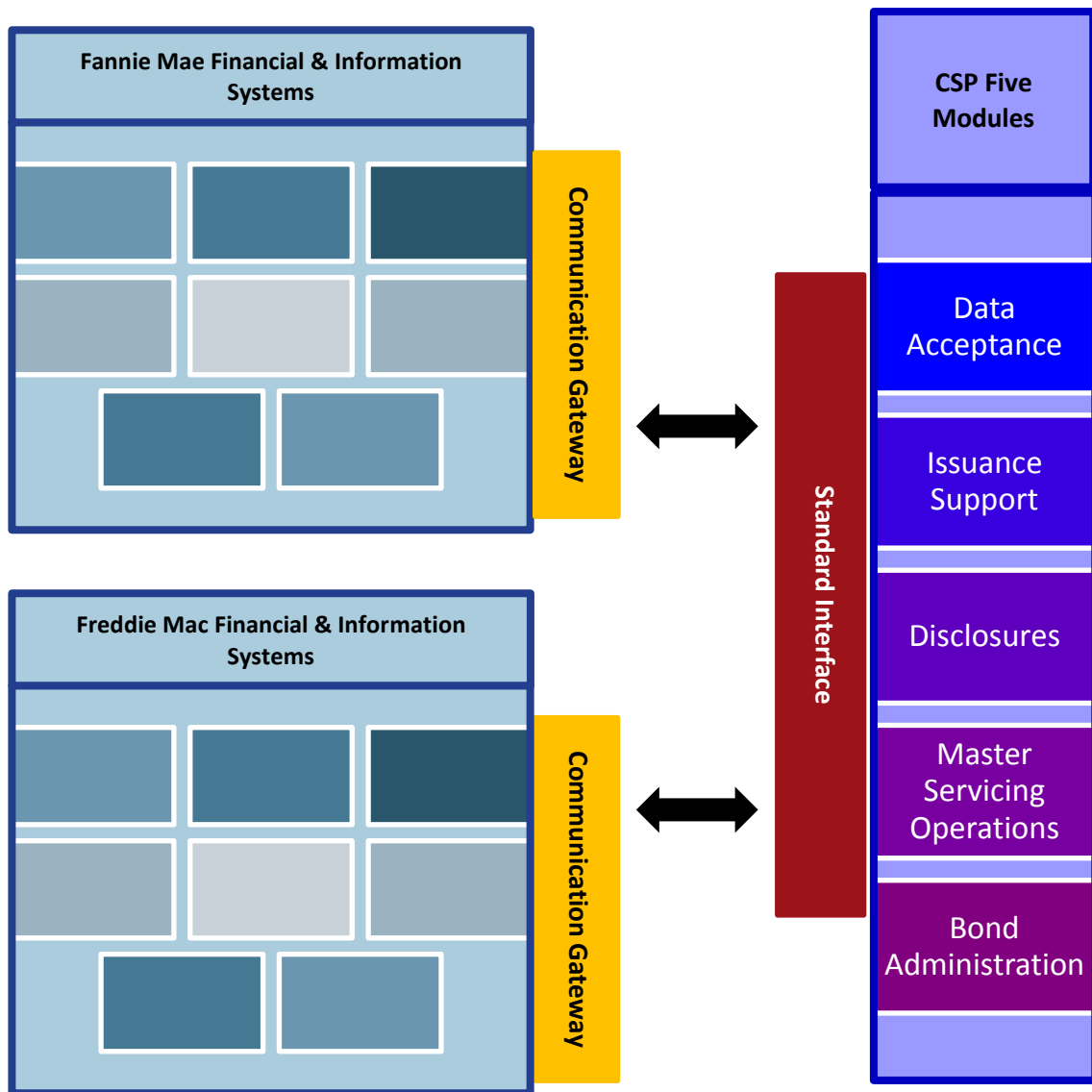
The process of enabling the Enterprises to use the CSP is known as “integration.” As depicted in Figure 4 below, the CSP is being designed with an **industry standard interface**, which can be thought of as the CSP’s “front door.” To communicate with the CSP, each Enterprise is developing what is known as a communication gateway.<sup>25</sup> In some cases, the Enterprises must modify their financial and information systems to interface with their communication gateways and, ultimately, communicate with the CSP.

**Industry standard interface** is an interface that is not customized for or dependent on customers’ systems.

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<sup>25</sup> Both the CSP’s “front door” and the Enterprises’ communication gateways are software components that rely on industry standard interfaces to facilitate communication.

**FIGURE 4. ENTERPRISE INTEGRATION WITH THE CSP**



### Current Status of the CSP Building Process

The CSP building process consists of three segments: (1) software development, which includes the five modules; (2) non-functional components, such as disaster recovery; and (3) establishment of CSS, a corporate infrastructure to own and operate the CSP. The software development segment is the most advanced, while the other two are still in the early stages.

### ***CSP Software Development***

According to FHFA and the team building the CSP, there has been considerable progress in the development of the software for the CSP. Specifically, a five-module CSP prototype has been completed, planned testing milestones have been accomplished, and the project has moved into the software development phase.<sup>26</sup> By one FHFA official's rough estimate, the work completed as of March 2014 accounts for more than half of the software development necessary to build the five modules of the CSP.

In 2013, the Enterprises retained an independent consultant to assess the CSP's architecture and the Enterprises' integration and implementation plans. FHFA officials said they took comfort from the independent consultant's review of the CSP's architecture. According to FHFA, the independent consultant concluded that the CSP technology is well-designed. However, the independent consultant also noted that the implementation of the CSP is not complete and, accordingly, the consultant could not reach any conclusions regarding the final product.

### ***CSP Non-Functional Components***

In addition to software development, efforts are underway to develop other critical components of the CSP. These include what are known as non-functional requirements, such as operational readiness, disaster recovery, and business continuity plans.<sup>27</sup> FHFA officials said retaining a vendor for these items will be a priority in 2014. Further, as discussed below, FHFA and the Enterprises are also involved in modifying the Enterprises' current financial and information systems as needed for the Enterprises to integrate with the CSP through communication gateways.

### ***CSP Management***

In October 2013, at FHFA's instruction, the Enterprises established a joint venture known as Common Securitization Solutions, LLC. CSS is an equally owned subsidiary of each Enterprise that will develop, build, own, and operate the CSP.<sup>28</sup> FHFA established CSS, in

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<sup>26</sup> According to FHFA and the Enterprises, the software for the CSP is being developed according to the Agile method; that is in small, short increments. For more information about the Agile method, see GAO, *Software Development: Effective Practices and Federal Challenges in Applying Agile Methods* (July 2012) (GAO-12-681) (online at: [www.gao.gov/assets/600/593091.pdf](http://www.gao.gov/assets/600/593091.pdf)).

<sup>27</sup> In essence, these are a combination of hardware, software, and services that ensure the capability to recover computer systems, prevent data loss, and operate without interruption in the event of a disaster.

<sup>28</sup> According to FHFA, the Agency will have regulatory and management authority over CSS. FHFA's assertion of authority is based upon CSS's status as an asset and affiliate of the Enterprises, which are under FHFA's conservatorship and subject to FHFA's regulatory regimen. As a result, FHFA will have considerable discretion in defining the new entity's role and directing its actions. The Board of Managers that will manage

part, to create consensus between the Enterprises regarding the development and operation of the CSP.<sup>29</sup> FHFA has also expressed the intention for CSS to be able to operate the CSP independently so that it is usable by any issuer, servicer, agent, or other market participant.

In June 2013, months before CSS was created, FHFA and the Enterprises retained a search firm to identify candidates for two CSS offices: the Chair of the Board of Managers, and the CEO. In November 2013, FHFA reported that the identification and interviewing of candidates for both positions was well underway. However, FHFA has not made a public statement updating the status of these recruitment efforts since its Director was sworn in on January 6, 2014. In fact, an FHFA official told us that the new Director and his staff are reviewing the CSP, considering such foundational elements as the scope of the project, as well as their options for reducing its risks.

## **Challenges to the Development and Implementation of the CSP**

FHFA and the Enterprises face several challenges in developing and implementing the CSP. Some of these challenges are discussed below.

### ***The Technological Challenge of Large-Scale IT Development***

The development of large-scale IT projects, such as the CSP, is complex, challenging, and often risky. The challenges inherent in developing the CSP are compounded by the number of parties involved – FHFA, Fannie Mae, Freddie Mac, and CSS. The inherent challenges are also compounded by the scope of the project – developing the CSP’s five modules, as well as modifying the Enterprises’ existing infrastructures to allow integration with the CSP.<sup>30</sup>

The Enterprises have not always been successful in controlling costs and delivering IT projects successfully or on time. We believe that this raises questions about their capacity to

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CSS will be subject to FHFA’s conservatorship and supervisory authorities to the same extent as the Enterprises’ Boards of Directors. The Board of Managers initially will consist of a CEO, a Chair, and two Managers. FHFA will designate the CEO and Chair of the Board, and each Enterprise will designate one Manager. The Board of Managers is not yet operational. CSS’s current management consists of an FHFA-appointed Head of Technology and Clients Services and a Head of Operations.

<sup>29</sup> As an independent entity, CSS will have to replicate a number of corporate functions performed by the Enterprises, such as human resources and accounting. CSS will either perform these functions directly or will retain third-party vendors. In the interim, the Enterprises will provide these services under agreements with CSS.

<sup>30</sup> According to CSS’s leadership, they have employed a risk mitigation approach to develop the CSP that includes: the use of industry standard software packages; the transfer of long-term maintenance to CSS staff; and the employment of testing milestones for compliance with the CSP’s architecture and quality standards.

successfully develop and implement the CSP.<sup>31</sup> For example, Fannie Mae's post-conservatorship attempt to update its master servicing system was unsuccessful because it went well over budget, took longer than planned, and did not satisfy its initial requirements. A senior FHFA official observed that Fannie Mae has taken on some IT projects that have been harder and more expensive than anticipated. Moreover, Freddie Mac invested tens of millions of dollars in an IT project that was ultimately cancelled in 2011 as it proved to be unworkable.<sup>32</sup>

We also note that FHFA does not have experience in overseeing the development and implementation of a large and complex IT project similar to the CSP. Moreover, FHFA is a relatively small federal financial regulator tasked with multiple responsibilities. These factors make it less than certain that the Agency currently possesses the technical expertise necessary to effectively oversee the development and implementation of the CSP. Consequently, the endeavor is not without risks.

### ***Integration Is Complicated, Costly, and Potentially Risky***

A critical IT challenge facing FHFA and the Enterprises is modifying the Enterprises' legacy systems so that they can communicate with the CSP. FHFA officials and Enterprise executives said that the process will be complex and challenging. Moreover, it may take longer to complete – and be more expensive – than building the five modules that will carry out the back office securitization functions.

According to an FHFA official, integration is more difficult than building the CSP because the CSP can be built fresh with current, industry standard building blocks and technology. In contrast, integration, which involves modifying the Enterprises' existing systems to permit the Enterprises to use the CSP, is complex and risky because some of the Enterprises' systems are outmoded and are currently being upgraded. Fundamentally, if integration is not managed well, then the CSP may not function as planned.

The Chief Executive Officers (CEO) of both Enterprises voiced their concerns about integration in an August 2013 meeting with the Agency. They told FHFA that integration would require too many internal changes to be made too quickly. Fannie Mae's CEO, in particular, was concerned about the significant operational risks associated with the changes

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<sup>31</sup> In its 2012 annual examinations of the Enterprises, FHFA rated each Enterprise's operational risk as a matter of "significant concern," in part, because of the reliance on outdated IT systems.

<sup>32</sup> In the wake of this large-scale IT failure, Freddie Mac implemented a new approach to IT development focused on smaller more incremental projects. Freddie Mac considers its new approach to be successful in resolving past concerns about the Enterprise's IT development.

that would have to be made to his company's internal systems.<sup>33</sup> According to an FHFA official, the CEOs' concerns were not a surprise to the Agency.

Consistent with its 2013 Scorecard goals, FHFA directed the Enterprises to submit integration plans to the Agency by September 30, 2013.<sup>34</sup> The Enterprises submitted their plans by the deadline. However, as FHFA expected, the plans were high-level and the Agency instructed the Enterprises to resubmit more detailed plans. According to FHFA, for example, Fannie Mae's September 30, 2013, plan did not adequately detail how the Enterprise would transition from integrating a small segment to the entire portfolio.<sup>35</sup>

Subsequently, FHFA required the Enterprises to revise their integration plans to include realistic goals and timelines that are achievable without excessive risk. The Enterprises completed their revised integration plans and submitted them to the Agency by January 2014. FHFA is currently reviewing the revised plans.

### ***It Is Uncertain that Private-Market Participants Will Use the CSP***

We believe there are uncertainties about whether the CSP will be used for private-market securitizations. First, it is difficult to gauge private-market participants' interest in using the CSP. According to one FHFA official, thus far, the few private institutions that securitize mortgages have not shown significant interest in using the CSP.<sup>36</sup> Second, the current market for PLMBS is weak. The PLMBS market collapsed in 2008 with the onset of the financial crisis, and some market observers suggest that the return of a robust PLMBS market is

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<sup>33</sup> The CSS team developing the CSP considers simultaneous integration of the CSP with both Enterprises as an unacceptable risk, and therefore has required that a stabilization period occur between all major events. The timing and manner in which each Enterprise will integrate with the CSP remain an open question.

<sup>34</sup> FHFA uses Scorecard goals to align the Enterprises' business objectives with the Strategic Plan. A significant percentage of FHFA's 2013 Scorecard goals for the Enterprises was dedicated to building the CSP and planning for the Enterprises' integrations. FHFA established five CSP-specific goals: (1) establish an ownership and governance structure; (2) develop design, scope, and functional requirements for the CSP; (3) develop multiyear plans, including integration; (4) develop and begin testing the CSP; and (5) support FHFA's progress reports to the public. See FHFA, *Conservatorship Strategic Plan: Performance Goals for 2013* (Mar. 4, 2013) (online at: [www.fhfa.gov/AboutUs/Reports/ReportDocuments/2013EnterpriseScorecard\\_508.pdf](http://www.fhfa.gov/AboutUs/Reports/ReportDocuments/2013EnterpriseScorecard_508.pdf)).

<sup>35</sup> According to Freddie Mac, the Enterprise understood that it needed to resubmit its integration plan because the scope of the CSP project changed. Specifically, FHFA determined that servicers would transmit data and cash to the Enterprises rather than directly to the Platform.

<sup>36</sup> Other FHFA officials explained that, for now, FHFA is keeping the market at bay; and if PLMBS participants decide to use the CSP, it will only be after the Enterprises.



unlikely to occur soon.<sup>37</sup> An FHFA official observed that private-market interest in the CSP may increase once it becomes operational and there is a rebound in the PLMBS market.

In public remarks delivered after the conclusion of the fieldwork for this report, Director Watt announced that “the [Agency’s] top objective for the Common Securitization Platform is to make sure that it works for the benefit of Fannie Mae and Freddie Mac” and defined a successful outcome for the CSP as a “seamless transition from the current in-house systems that issue new securities at each Enterprise to a future joint venture owned by Fannie Mae and Freddie Mac that operates one system with updated technology.” FHFA is requiring the CSP to use “the systems, software and standards used in the private sector wherever possible.” According to Director Watt, “this will ensure that the CSP will be adaptable for use by other secondary market actors – including private label securities issuers – when the future state is more defined.”<sup>38</sup>

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<sup>37</sup> See, e.g., “Seven Reasons Private-Label MBS Are Not Coming Back Any Time Soon,” National Mortgage News, March 20, 2014 (online at: [www.nationalmortgagenews.com/blogs/hearing/seven-reasons-private-label-mbs-are-not-coming-back-any-time-soon-1041389-1.html](http://www.nationalmortgagenews.com/blogs/hearing/seven-reasons-private-label-mbs-are-not-coming-back-any-time-soon-1041389-1.html)).

<sup>38</sup> FHFA, *Managing the Present: The 2014 Strategic Plan for the Conservatorships of Fannie Mae and Freddie Mac*, Prepared Remarks of Melvin L. Watt, Director, Federal Housing Finance Agency (May 13, 2014) (online at: [www.fhfa.gov/Media/PublicAffairs/Pages/Watt-Brookings-Keynote-5132014.aspx](http://www.fhfa.gov/Media/PublicAffairs/Pages/Watt-Brookings-Keynote-5132014.aspx)).

## FINDING .....

### 1. FHFA has not yet fully employed essential project management tools in the development of the CSP

As shown above, FHFA, the Enterprises, and CSS face several challenges in the development and implementation of the CSP. To date, FHFA has not fully applied two basic project management tools that could assist in meeting these challenges: a schedule (timeline) and a cost estimate. FHFA, the Enterprises, and CSS have prepared and developed various estimates, but have not settled on a comprehensive schedule or budget. As a result, we believe the risks inherent to the project have been heightened. Further, Congress, financial market participants, and taxpayers have been left without certainty that the project should proceed or that, if it does, it will achieve its stated objectives in an efficient and effective manner.<sup>39</sup>

#### ***FHFA and the Enterprises Have Not Established a Schedule for Completing the CSP***

Both OMB and GAO have established guidance on the planning and acquisition of IT systems.<sup>40</sup> According to OMB's and GAO's guidance, the establishment of schedules is a sound planning practice for projects such as the CSP.

GAO's guidance states that "a well-planned schedule is a fundamental management tool...specifying when work will be performed...and measuring program performance against an approved plan."<sup>41</sup> GAO identifies the benefits of a well-constructed schedule. It notes that such a schedule "[shows] when major events are expected, as well as the completion dates for all activities leading up to them, which can help determine if the program's parameters are realistic and achievable."<sup>42</sup> GAO's guidance also reflects sound governance principles consistent with industry standards.<sup>43</sup>

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<sup>39</sup> We did not analyze FHFA's decision to develop the CSP. Our recommendations should not be interpreted as either an endorsement or condemnation of the CSP project.

<sup>40</sup> See OMB, *Improving Information Technology (IT) Project Planning and Execution* (Aug. 4, 2005) (M-05-23) (online at: [www.whitehouse.gov/sites/default/files/omb/memoranda/fy2005/m05-23.pdf](http://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2005/m05-23.pdf)); GAO, *GAO Schedule Assessment Guide: Best Practices for Project Schedules* (May 2012) (GAO-12-12OG) (online at: [www.gao.gov/assets/600/591240.pdf](http://www.gao.gov/assets/600/591240.pdf)).

<sup>41</sup> GAO, *GAO Schedule Assessment Guide*, at 1.

<sup>42</sup> *Id.*

<sup>43</sup> See GAO, *GAO Schedule Assessment Guide*, at 1. For information on cost estimates and schedules as industry standard project management tools, see Project Management Institute, *A Guide to the Project Management Body of Knowledge*, at 141-226 (5th ed. 2013) (hereinafter "PMBOK Guide"). The Enterprises

After approximately two years of work, FHFA and the Enterprises have not yet finalized detailed schedules for completion of the CSP. One FHFA official explained that doing so has been difficult, in part, because of the CSP's shifting scope. We note that there are a number of things that FHFA and the Enterprises can look to now to help them develop a schedule to complete the CSP project.

First, FHFA has on hand the Enterprises' revised integration plans. FHFA told us that it is currently reviewing these plans, as well as the Enterprises' proposed implementation schedules. It is likely that the Enterprises' schedules provide a good place for FHFA to start a timeline. Second, in a recent examination of an Enterprise's project management capabilities, FHFA's Division of Enterprise Regulation (DER) identified a number of steps that the Enterprise could take to establish goals and timelines for integration without engaging in excessive risk taking.<sup>44</sup>

With the establishment of timelines for the crucial integration tasks, FHFA and the Enterprises may be positioned to develop comprehensive schedules for the CSP's overall completion. Such schedules would allow the Agency to better assess whether the CSP should proceed and is on track to meet its objectives. The failure to meet scheduled milestones could help determine whether revisions to the CSP project are necessary. Further, if FHFA published the schedules, then Congress and other outside parties could also better assess the overall project and its progress.

### ***FHFA and the Enterprises Have Not Established a Total Cost Estimate for the CSP***

OMB and GAO have also established detailed guidance on developing cost estimates for IT projects such as the CSP.<sup>45</sup> GAO identifies several reasons for developing cost estimates, evaluating resource requirements at key decision points, and developing performance

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collaborated on the CSP at the direction of their conservator, FHFA. We note that, outside of conservatorship, the Enterprises have policies and procedures in place to authorize and guide projects of the significance and scope of the CSP. Fannie Mae's and Freddie Mac's policies and procedures require the Enterprises to justify IT development with business cases, cost-benefit analyses, identified requirements, schedules, and budgets.

<sup>44</sup> DER examined the Enterprises' project management in 2013. DER launched its examination due to concern about the challenges associated with integrating the Enterprises' legacy systems into the CSP. DER identified areas that generally needed improvement, such as prioritizing projects, sequencing the implementation of projects, identifying project interdependencies, and allocating resources. DER concluded that improvement in these areas could help the Enterprises establish realistic goals and timelines that could be achieved without excessive risk taking. FHFA stated that it would consider the results of these examinations in making future decisions concerning the Enterprises' integration plans.

<sup>45</sup> See OMB, *Improving Information Technology (IT) Project Planning and Execution* (Aug. 4, 2005) (M-05-23) (online at: [www.whitehouse.gov/sites/default/files/omb/memoranda/fy2005/m05-23.pdf](http://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2005/m05-23.pdf)); GAO, *GAO Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Capital Program Costs* (Mar. 2009) (GAO-09-3SP) (online at: [www.gao.gov/assets/80/77175.pdf](http://www.gao.gov/assets/80/77175.pdf)).

measurement baselines. In addition, GAO states that realistic estimates of projected costs enable effective resource allocation and increase the chances that a given program will succeed. GAO's guidance is consistent with governance principles commonly applied to project management.<sup>46</sup>

As of December 31, 2013, the Enterprises spent a combined total of approximately \$65 million to build the CSP. This year the Enterprises are spending between \$5 million and \$7 million per month to continue that effort. In addition, Fannie Mae budgeted \$42 million for integration-related projects<sup>47</sup> for the first three months of 2014; and Freddie Mac budgeted \$14 million for integration for the period January 1, 2014 to May 31, 2014. According to Fannie Mae documents, in 2013 FHFA told Fannie Mae that it should not feel constrained by a budget.

In fact, FHFA and the Enterprises have yet to develop a total estimated cost for the CSP. One FHFA official explained that they have been challenged in developing cost estimates because certain costs are difficult to predict at this time, such as the cost of modifying the Enterprises' existing systems to permit integration with the CSP. The Enterprises and the team developing the CSP have submitted draft budgets for FHFA's review, but no budget has been finalized or endorsed by the Agency.

We recognize that developing cost estimates for the various components of the CSP may be challenging. However, both OMB and GAO guidance provide structured processes for addressing such challenges.<sup>48</sup> FHFA and the Enterprises may be positioned better today to implement this guidance and develop cost estimates than they were at the outset.<sup>49</sup>

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<sup>46</sup> See PMBOK Guide, *supra* note 43, at 193-226. For example, without an estimate one cannot analyze the cost versus the benefit to determine whether a project should be started or continued.

<sup>47</sup> Fannie Mae's budget of \$42 million includes \$20 million for CSP integration and another \$22 million for related projects, including updating the Enterprise's Loan Accounting and Loan Sourcing systems, among others. According to Fannie Mae, the Enterprise envisioned updating its Loan Accounting and Loan Sourcing systems regardless of FHFA's mandates to build the CSP. Fannie Mae's Loan Sourcing System takes data about loans the Enterprise purchases and formats the data for Fannie Mae's other internal systems.

<sup>48</sup> For example, GAO suggests, "[t]he management of a cost estimate involves continually updating the estimate with actual data as they become available, revising the estimate to reflect changes, and analyzing differences between estimated and actual costs..." GAO, *GAO Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Capital Program Costs* (Mar. 2009) (GAO-09-3SP), at i (online at: [www.gao.gov/assets/80/77175.pdf](http://www.gao.gov/assets/80/77175.pdf)). See also PMBOK Guide, *supra* note 43, at 217-25. Fannie Mae's Internal Audit group and FHFA's DER have each suggested that FHFA and the Enterprises apply this baselining approach to the CSP project.

<sup>49</sup> For example, an FHFA official estimated that roughly half of the software development for the five modules of the CSP has been completed. Thus, FHFA and the Enterprises may need to estimate only the cost of completing the remaining work. Further, FHFA and the Enterprises have initiated work on the non-functional requirements of the CSP, such as disaster recovery and build-out of CSS as a corporate entity. Consequently, they now have some basis upon which to estimate the cost to complete these requirements. Likewise, the

In 2012, when FHFA announced the CSP project, the Agency assumed that developing the CSP for both Enterprises would be less costly than each Enterprise updating its proprietary systems. However, Freddie Mac has concluded that the CSP will add to the cost of the Enterprise's securitization process because it costs additional money to build the CSP. Accordingly, launching the CSP project without any clear idea of what it would cost or, indeed, what it could cost, seems an inauspicious beginning. Absent a realistic budget or cost estimate, the Agency, Congress, and the public may encounter significant challenges in measuring the progress of the project, as well as in conducting any cost-benefit projections as the CSP project moves forward and evolves.

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Agency is presently reviewing the Enterprises' revised integration plans. If FHFA approves one or both of them, then it would likely have an informed basis upon which to estimate the cost for completing the Enterprises' integration and, perhaps, the balance of the CSP project.

## CONCLUSIONS .....

FHFA's CSP initiative represents an ambitious effort to improve the existing securitization processes of the Enterprises. According to FHFA, the CSP offers significant benefits, including economies of scale, as well as a potential market utility, that could outlast reforms to the current structure of the Enterprises. However, the CSP project faces significant challenges, such as integration. If they are not mitigated sufficiently, then the risks associated with these challenges will continue to threaten the development and implementation of the CSP. While FHFA and the Enterprises have taken a number of steps to develop the CSP, the Agency has not yet fully applied essential project management tools. By doing so, FHFA could enhance the potential for the CSP's success.

## RECOMMENDATIONS .....

To strengthen the management of the CSP, we recommend that FHFA:

1. Establish schedules and timeframes for completing key components of the project, as well as an overall completion date as appropriate; and
2. Establish cost estimates for varying stages of the initiative, as well as an overall cost estimate.

## OBJECTIVE, SCOPE, AND METHODOLOGY .....

The objective of this evaluation was to assess FHFA’s oversight of the Enterprises’ development of the CSP.

To address this objective, we:

- Reviewed HERA, the Government Performance and Results Modernization Act of 2010, the Clinger-Cohen Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, SEC regulations, and OMB memoranda;
- Reviewed GAO reports;
- Reviewed *PMBOK Guide* (5th ed. 2013).
- Reviewed FHFA documents including its public statements, Strategic Plan, White Paper, internal communications, presentations, directives, and examination reports;
- Reviewed Enterprise, CSP, and CSS documents including public statements, internal communications, presentations, reports by the Enterprises’ independent consultant, Fannie Mae’s Internal Audit reports, CSS’s Limited Liability Company Agreement, and the Enterprises’ financial disclosures;
- Reviewed industry comments to FHFA’s White Paper and industry publications;
- Reviewed documents provided to us by the Enterprises’ outside consultant;
- Interviewed senior FHFA officials;
- Interviewed current and former senior Enterprise employees; and
- Interviewed senior members of the team building the CSP.

We did not independently test the reliability of the data provided by FHFA or the Enterprises. Estimating the cost of the build of the CSP or the cost of integration is beyond the scope of this evaluation.

This evaluation was conducted under the authority of the Inspector General Act and is in accordance with the *Quality Standards for Inspection and Evaluation* (January 2012), which were promulgated by the Council of the Inspectors General on Integrity and Efficiency. These standards require OIG to plan and perform an evaluation that obtains sufficient evidence to provide a reasonable basis to support the findings and recommendations made herein. We believe that the finding and recommendations discussed in this report meet these standards.

A draft of this report was sent to FHFA for comment. FHFA agreed to both of OIG's recommendations. FHFA's comments are attached hereto as Appendix A.

The performance period for this evaluation was November 2012 to March 2014.



## APPENDIX A .....

### FHFA's Comments on FHFA-OIG's Findings and Recommendation

#### MEMORANDUM

TO: Richard B. Parker, Deputy Inspector General for Evaluations

FROM: Wanda Delco, Deputy Director, Division of Conservatorship *IRS for WP*

SUBJECT: Evaluation Report: *Status of the Common Securitization Platform's Development*

DATE: May 2, 2014

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This memorandum transmits the Federal Housing Finance Agency's (FHFA) management response to the recommendations in the report prepared by FHFA-OIG, *Status of the Common Securitization Platform's Development*. We appreciate the opportunity to provide feedback on this draft report and the FHFA-OIG findings.

The evaluation was conducted by the FHFA-OIG from November 2012 to March 2014. The report discusses the Enterprises' securitization processes, focusing on components that are the focus of the CSP project, the background and current status of the CSP project itself and challenges OIG sees to the success of the project.

The text of the FHFA-OIG recommendations and FHFA's formal responses are provided below.

#### **FHFA-OIG recommendation**

1. *Establish schedules and timeframes for completing key components of the project, as well as an overall completion date as appropriate.*

#### **FHFA Management Response**

FHFA agrees with the recommendation to establish schedules and timeframes for the CSP project. These are key project management tools that are valuable in the context of the CSP project. We view schedule as one of the three key dimensions of any project: scope, schedule and budget.

A final schedule and timetable for completing the CSP is dependent on final decisions on the scope of CSP. In late 2012, FHFA announced the high level objectives for the project and requested public input on both the principles and on the proposed scope of the CSP. In 2013, FHFA evaluated and refined the scope in light of the public feedback, while making good progress on foundational elements of the CSP. 2014 has brought new leadership to the agency and, as the report notes on page 19, there is an assessment underway of the scope of the project and options for reducing project risks. We expect this assessment to be completed in the very

near future. Once the CSP project scope is finalized through this process, we will work with the Enterprises to revise and update the current draft schedules provided to us by the Enterprises and CSP team.

**FHFA-OIG recommendation**

2. *Establish cost estimates for varying stages of the initiative, as well as an overall cost estimate.*

**FHFA Management Response**

FHFA agrees with the recommendation to establish cost estimates for the CSP, and has been working with the Enterprises to develop and refine cost estimates. As with the above response, however, we do not yet view the current cost estimates as final; they are subject to change as the scope is refined.

cc: Eric Stein, Special Advisor and Acting Chief of Staff  
John Major, Internal Controls and Audit Follow-Up Manager

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